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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/824,708	04/04/2001	Masaki Takakuwa	1-130	1769

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EXAMINER

JENKINS, JERMAINE L

ART UNIT PAPER NUMBER

2855

DATE MAILED: 06/06/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/824,708

Applicant(s)

TAKAKUWA ET AL.

Examiner

Jermaine Jenkins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) ____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1, 2, 5 & 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baba et al in view of Nishimura et al.

Baba discloses a pressure sensor as illustrated in Figure 1 & 4 comprising said housing (11) (Column 3, line 16) and said pressure sensitive element (24) that is covered by a protective layer (27) (Column 4, lines 3-10). However, Baba does not disclose a filter attached to the environmental pressure introduction port so that the environmental pressure enters the case after passing through the filter, the filter having a filter surface that is positioned along a gravitational directional when the pressure sensor is used.

Nishimura discloses a pressure sensor as illustrated in Figure 1 comprising said molding member that includes an atmospheric pressure introducing path (12a) and an atmospheric pressure introducing inlet (12b) on the outer surface and said filter that is located on the atmospheric pressure introducing path (12a) (Column 2, lines 54-58).

Since Baba and Nishimura are both in the same field of endeavor, the purpose disclosed by Nishimura would have been recognized in the pertinent art of Baba.

Therefore it would have been obvious at the time the invention was made to a person having ordinary skill in the art to specifically modify Baba as taught by Nishimura to mount a

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filter onto the environmental pressure introduction port of a pressure sensor for the sole purpose to block any unwanted substances or materials from intervening with the primary function of the pressure sensor.

Claim Rejections - 35 USC § 103

3. Claims 3 & 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Baba in view of Nishimura as applied to claims 1, 2, 5 & 6 above, and further in view of Kofoed et al.

Baba as modified by Nishimura teaches all the features except said environmental pressure introduction port is composed of a plurality of opening portions that are divided by a frame and said plurality of opening portions has an elongated shape with a longitudinal direction approximately parallel to the gravitational direction.

Kofoed discloses a differential pressure sensor in Figure 2 comprising said pressure ports (120 & 124) that face substantially perpendicular (longitudinal) to axis A of housing (102) (Column 6, lines 1-2).

Therefore it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Baba as taught by Nishimura and Kofoed to mount a filter onto the environmental pressure introduction port of a pressure sensor and a plurality of opening portions for the sole purpose of increasing the pressure measurement readings within the sensor.

Claim Rejections - 35 USC § 103

4. Claims 7-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Bada in view of Nishimura et al and Kofoed et al.

Bada teaches the invention as claimed except a filter attached to the environmental pressure introduction portion so that the environmental pressure is introduced into the case after passing through the filter and the environmental pressure introduction port is divided into a plurality of opening portions that are covered with the filter.

Nishimura discloses a pressure sensor as illustrated in Figure 1 comprising said molding member that includes an atmospheric pressure introducing path (12a) and an atmospheric pressure introducing inlet (12b) on the outer surface and a filter (13) that is located on the atmospheric pressure introducing path (12a) (Column 2, lines 54-58).

Kofoed discloses a differential pressure sensor in Figure 2 comprising said pressure ports (120 & 124) that face substantially perpendicular (longitudinal) to axis A of housing (102) (Column 6, lines 1-2).

Therefore it would have been obvious at the time the invention was made to a person having ordinary skill in the art to modify Baba as taught by Nishimura and Kofoed to mount a filter onto the environmental pressure introduction port of a pressure sensor and a plurality of opening portions for the sole purpose of increasing the pressure measurement readings within the sensor.

Claim Rejections - 35 USC § 103

5. Claims 12-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kofoed et al in view of Nishimura et al.

Kofoed discloses a differential pressure sensor as illustrated in Figure 1 comprising said pressure ports (120 & 124) of lumen (122 & 126) respectively that face substantially perpendicular (longitudinal) to axis A of housing (102) (Column 6, lines 1-2). However, Kofoed

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does not disclose a filter covering the environmental pressure introduction port and said filter being at a particular angle that forms a range from 0 to 45.

Nishimura discloses a pressure sensor as illustrated in Figure 1 comprising said molding member that includes an atmospheric pressure introducing path (12a) and an atmospheric pressure introducing inlet (12b) on the outer surface and a filter (13) that is located on the atmospheric pressure introducing path (12a) (Column 2, lines 54-58) at some particular angle. However it has been held that where the general conditions of a claim are disclosed in the prior art, discovering the optimum or workable ranges involves only routine skill in the art. *In re Aller*, 105 USPQ 233.

Since Kofoed and Nishimura are both in the same field of endeavor, the purpose disclosed by Nishimura would have been recognized in the pertinent art of Kofoed.

Therefore it would have been obvious at the time the invention was made to a person having ordinary skill in the art to specifically modify Kofoed as taught by Nishimura to mount a filter at a particular angle of choice is desired onto the environmental pressure introduction port of a pressure sensor for the sole purpose to block any unwanted substances or materials from intervening with the primary function of the pressure sensor.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jermaine Jenkins whose telephone number is 703-305-3839. The examiner can normally be reached on Monday-Friday 8am-430pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Benjamin Fuller can be reached on 703-308-0079. The fax phone numbers for the

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organization where this application or proceeding is assigned are 703-308-7725 for regular communications and 703-305-3839 for After Final communications.


Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-306-3431.

Jermaine Jenkins

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JJ

June 3, 2002


Benjamin R. Fuller
Supervisory Patent Examiner
Technology Center 2800